

# **ENVIRONMENTAL ASSESSMENT**

## **DEMOLITION OF CENTRAL STEAM PLANT AND ASSOCIATED FACILITIES**

**FAIRCHILD AFB, WASHINGTON**



**U.S. AIR FORCE**



**DEPARTMENT OF THE AIR FORCE  
AIR MOBILITY COMMAND  
FAIRCHILD AFB, WASHINGTON**

**NOVEMBER 2003**

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# **FINDING OF NO SIGNIFICANT IMPACT**

## **DEMOLITION OF CENTRAL STEAM PLANT AND ASSOCIATED FACILITIES ON FAIRCHILD AIR FORCE BASE, WASHINGTON**

### **AGENCY**

Department of the Air Force, Fairchild Air Force Base (AFB), Washington.

### **BACKGROUND**

The central steam plant and associated facilities were formerly used for heat on Fairchild AFB. The facilities are no longer operational because natural gas boilers were installed in individual buildings. Demolition of the central steam plant and associated facilities is needed in order to reduce safety hazards and improve land use on the site.

### **PROPOSED ACTION**

The Air Force is proposing to demolish the central steam plant and associated facilities on Fairchild AFB. Structures to be demolished would include: coal-burning and ash-handling equipment within the central steam plant (Bldg 2175) including, but not limited to, coal pulverizers, weigh belt feeders, coal crusher with conveyor and dust collector, ash handling system, and steam-driven vacuum at the top of the steam plant; the spray dryer absorber (SDA)/baghouse steel structures, concrete exhaust stack, connecting piping between the steam plant and SDA/baghouse; all ash-handling equipment; ash slurry system equipment; and, all ancillary equipment within the facility. The Proposed Action would also result in the removal and reuse or recycling of 112 tons of pebble lime and the removal of an underground tank. No replacement structures would be constructed on the site. The land would be landscaped to match surrounding areas, and this site would become available for other uses.

### **ALTERNATIVE ACTION**

The Air Force evaluated the alternative of retrofitting the central steam plant and has found that it is not feasible to convert this facility for other uses. This alternative was eliminated from further consideration.

### **NO ACTION ALTERNATIVE**

Under the No Action Alternative, the central steam plant and associated buildings and equipment would remain intact at their current location. The No Action Alternative would result in no demolition activities or operational changes on Fairchild AFB.

### **SUMMARY OF FINDINGS**

Pursuant to NEPA guidance, 32 CFR 989 (*Air Force Environmental Impact Analysis Process*), and other applicable regulations, the Air Force completed an environmental assessment (EA) of the potential environmental consequences of implementation of the proposed demolition of the central steam plant and associated facilities. The EA, which supports this Finding of No Significant Impact (FONSI), evaluated the No Action Alternative and Proposed Action.

### **EVALUATION OF THE NO ACTION ALTERNATIVE**

No significant impacts occur from the continuation of baseline activities (No Action Alternative).

### **EVALUATION OF THE PROPOSED ACTION, FAIRCHILD AFB**

**Air Quality.** The greatest increase for any of the criteria air pollutants will be 4.68 tons per year for particulate matter (PM<sub>10</sub>), which would be equivalent to 0.0671 percent of the baseline PM<sub>10</sub> emissions within the air quality control region. These emissions do not exceed the threshold emissions limits, and a

formal conformity determination is not required. Air pollutant emissions from demolition of the central steam plant and associated facilities would not be considered significant.

**Noise.** Construction noise for demolition of the central steam plant and associated facilities may have short-term impact on personnel at the Base. During demolition activities, noise levels would increase in the immediate area. The demolition contractor would be responsible for ensuring that the exterior and interior noise level standard would not be exceeded during demolition activities, and the contractor would also determine if hearing protection is required in the work area. The impact from demolition noise will not be considered significant. Impacts to the noise environment as a result of the Proposed Action would not be considered significant.

**Hazardous Wastes and Hazardous Materials.** Hazardous wastes generated during demolition will be removed in accordance with the Fairchild AFB Hazardous Waste Management Plan and applicable regulatory requirements. The 112 tons of pebble lime will be containerized before being removed from the site and then either reused or recycled.

**Biological Resources.** Demolition activities will occur within developed, maintained areas with extant, highly modified and disturbed landscape, and will not substantially change habitat for plant or animal species. Demolition will not result in any impacts to threatened or endangered species that occur on Fairchild AFB. The Proposed Action will not be located near nesting areas for grasshopper sparrow, a Washington sensitive species. There are no wetlands located in the area of the central steam plant.

**Cultural Resources.** No known archaeological sites are located in the area of the central steam plant on Fairchild AFB. The probability is low that undisturbed, significant archaeological resources, including human graves, will be discovered on Fairchild AFB during demolition. Demolition will be managed in accordance with the Fairchild AFB Integrated Cultural Resources Management Plan (ICRMP) that includes procedures that must be followed in the event of inadvertent discovery of cultural resources.

The central steam plant is not eligible for listing on the National Register of Historic Places (NRHP). The Proposed Action will not result in demolition or modifications to any historic properties or structures. The Proposed Action will not result in impacts to historical resources.

No Native American concerns have been identified for Fairchild AFB. The Proposed Action will be implemented in accordance with the Fairchild AFB ICRMP, which specifies notification procedures applicable to Native American groups. With compliance to the ICRMP, the Proposed Action will not result in impacts to Native American concerns.

**Solid Waste Management.** Demolition debris disposal will not exceed the capacity of the permitted, off-Base landfill. Solid waste generated by personnel will not change as a result of the Proposed Action. Impacts from solid waste disposal will not be considered significant.

**Environmental Management.** The Proposed Action will result in recycling and reuse of materials to reduce the amount of debris that will enter landfills. The Proposed Action will not be expected to result in the inability of the Base to achieve its Pollution Prevention goals. Asbestos-containing material (ACM) and lead-based paint (LBP) will be removed in accordance with existing guidance. Non-friable ACM will be abated before demolition activities. Demolition activities will be coordinated to ensure that demolition will avoid interference with any ongoing Environmental Restoration Program (ERP) investigation and remediation work and will not worsen the condition of any site.

## **ENVIRONMENTAL JUSTICE**

Based on analysis conducted for this EA, it is determined that activities associated with the Proposed Action and No Action Alternative will not impose adverse environmental effects on adjacent populations. Therefore, no disproportionately high and adverse effects will occur to minority and low-income populations.

## DECISION

Based on my review of the facts and analyses contained in the EA, I conclude that implementation of the Proposed Action will not have a significant impact either by itself or when considering cumulative impacts. Accordingly, requirements of the NEPA, regulations promulgated by the Council on Environmental Quality, and 32 CFR 989 are fulfilled and an environmental impact statement is not required.



RONALD R. DANIELS, Deputy Base Civil Engineer  
Executive Secretary  
Environmental Protection Committee  
Fairchild Air Force Base, Washington

6 Nov 03

Date

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**ENVIRONMENTAL ASSESSMENT**  
**DEMOLITION OF CENTRAL STEAM PLANT**  
**AND ASSOCIATED FACILITIES**  
**FAIRCHILD AIR FORCE BASE, WASHINGTON**

**DEPARTMENT OF THE AIR FORCE**  
**AIR MOBILITY COMMAND**  
**FAIRCHILD AIR FORCE BASE, WASHINGTON**

**NOVEMBER 2003**

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## **PRIVACY ADVISORY NOTICE**

Your comments on this draft Environmental Assessment are requested. Letters or other written or oral comments provided may be published in the Final EA. As required by law, comments will be addressed in the Final EA and made available to the public. Any personal information provided will be used only to identify your intention to make a statement during the public comment portion of any public meetings or hearings, or to fulfill requests for copies of the Final EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EA. However, only names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the Final EA.

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**COVER SHEET  
ENVIRONMENTAL ASSESSMENT**

**DEMOLITION OF CENTRAL STEAM PLANT  
AND ASSOCIATED FACILITIES AT  
FAIRCHILD AIR FORCE BASE, WASHINGTON**

**Responsible Agency:** Department of the Air Force, Fairchild Air Force Base (AFB), Washington.

**Proposed Action:** Demolish central steam plant and associated facilities on Fairchild AFB.

**Contact Information:** Written comments and inquiries regarding this document should be directed to: Lt Matthew Hasson, 92 ARW/PA, 1 E. Bong St., Suite 116A, Fairchild AFB, WA 99011-9588. Phone: (509) 247-9494, Fax: (509) 247-2120 email: matthew.hasson@fairchild.af.mil.

**Report Designation:** Environmental Assessment

**Abstract:** The Air Force is proposing to demolish the central steam plant (Bldg 2175) and associated facilities on Fairchild AFB. The action is needed to: increase safety and occupational health by eliminating unoccupied buildings and removing hazardous material; reduce the amount of hazardous material on Fairchild AFB by demolishing buildings and removing debris; and improve overall base appearance and increase potential land use. Under the No Action Alternative, demolition of the central steam plant and associated facilities would not be accomplished, and these non-operational structures would remain in their current condition. Resources considered in the impact analysis were: air quality; noise; hazardous wastes and hazardous materials; cultural resources; solid waste management; and, environmental management. No significant impacts would result from implementation of the Proposed Action or the No Action Alternative.

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**ACRONYMS AND ABBREVIATIONS**

ACM	Asbestos-containing materials
AFB	Air Force Base
AFI	Air Force Instruction
AHPA	Archeological and Historic Preservation Act
AI	The Asphalt Institute
AIRFA	American Indian Religious Freedom Act
AMC	Air Mobility Command
ANSI	American National Standards Institute
AOC	Area of Concern
APE	Area of Potential Effect
AQCR	Air Quality Control Region
ARPA	Archeological Resources Protection Act
AT/FP	Anti-Terrorism/Force Protection
AW	Airlift Wing
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CES/CEV	Civil Engineering Squadron/Environmental Flight
CFR	Code of Federal Regulations
CO	Carbon Monoxide
dB	Decibel
dBA	A-weighted decibel
DNL	Day-Night average sound Level
DoD	Department of Defense
E.O.	Executive Order
EA	Environmental Assessment
ECF	Entry Control Facility
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
ERP	Environmental Restoration Program
FONSI	Finding of No Significant Impact
FY	Fiscal year
FY02	Fiscal Year 2002
HQ AMC	Headquarters, Air Mobility Command
IC	Institutional Control(s)
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
IRP	Installation Restoration Program
lb	pound(s)
LBP	lead-based paint
µg/m <sup>3</sup>	micrograms per cubic meter
N <sub>2</sub> O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAS	National Academy of Sciences
NEPA	National Environmental Policy Act
NFA	No Further Action
NHPA	National Historic Preservation Act
NLR	Noise Level Reduction
NO	Nitric Oxide

NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
NRHP	National Register of Historic Places
O <sub>3</sub>	Ozone
Pb	Lead
PM <sub>10</sub>	Particulate Matter
PVC	Plastic Vinyl Coating
RI/FS	Remedial Investigation/Feasibility Study
ROI	Region of Influence
SDA	Spray dryer absorber
SHPO	State Historic Preservation Office
SI-IRA	Site Investigation – Interim Remedial Action
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur Dioxide
SO <sub>x</sub>	Sulfur Oxides
SWPPP	Storm Water Pollution Protection Plan
TCE	trichloroethene
tpy	tons per year
TSP	Total Suspended Particulates
USAF	United States Air Force
USC	United States Code
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Forest and Wildlife Service
VdB	vibration level in terms of decibels
VOC	Volatile Organic Compounds

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## **CHAPTER 1**

### **PURPOSE OF AND NEED FOR THE PROPOSED ACTION**

This chapter has six sections: introduction; need for the action; objectives of the action; scope of the environmental review; applicable regulatory requirements; and, organization of the document.

#### **1.1 INTRODUCTION**

The Air Force is proposing to demolish the central steam plant (Bldg 2175) and associated facilities on Fairchild AFB. Because natural gas boilers were installed at individual buildings on Fairchild AFB, the steam plant is no longer operational and has been closed. The aging centralized steam plant has been replaced by high-efficiency, low-maintenance, localized boilers that have fewer operating expenses and allow less energy loss. These boilers have been installed in approximately 80 buildings on the Base (Wouden, 2002).

Fairchild AFB is an Air Mobility Command (AMC) base located in eastern Washington approximately 12 miles west of the City of Spokane (Figure 1-1). Communities located near the Base include Airway Heights and Medical Lake.

#### **1.2 NEED FOR THE ACTION**

The action is needed to:

- Increase safety and occupational health by eliminating unoccupied buildings and removing hazardous waste;
- Reduce the amount of hazardous material on Fairchild AFB by demolishing buildings and removing debris; and,
- Improve overall base appearance and increase potential land use.

#### **1.3 OBJECTIVE OF THE ACTION**

The objective of the action is to eliminate the non-operational central steam plant, Bldg 2175. The purpose of the action is to improve land use in the area now covered by the central steam plant and associated facilities.

#### **1.4 SCOPE OF THE ENVIRONMENTAL REVIEW**

The National Environmental Policy Act (NEPA) of 1969, as amended, requires federal agencies to consider environmental consequences in the decision-making process. The President's Council on Environmental Quality (CEQ) issued regulations to implement NEPA that include provisions for both the content and procedural aspects of the required environmental analysis. The Air Force Environmental Impact Analysis Process (EIAP) is accomplished through adherence to the procedures set forth in CEQ regulations (40 Code of

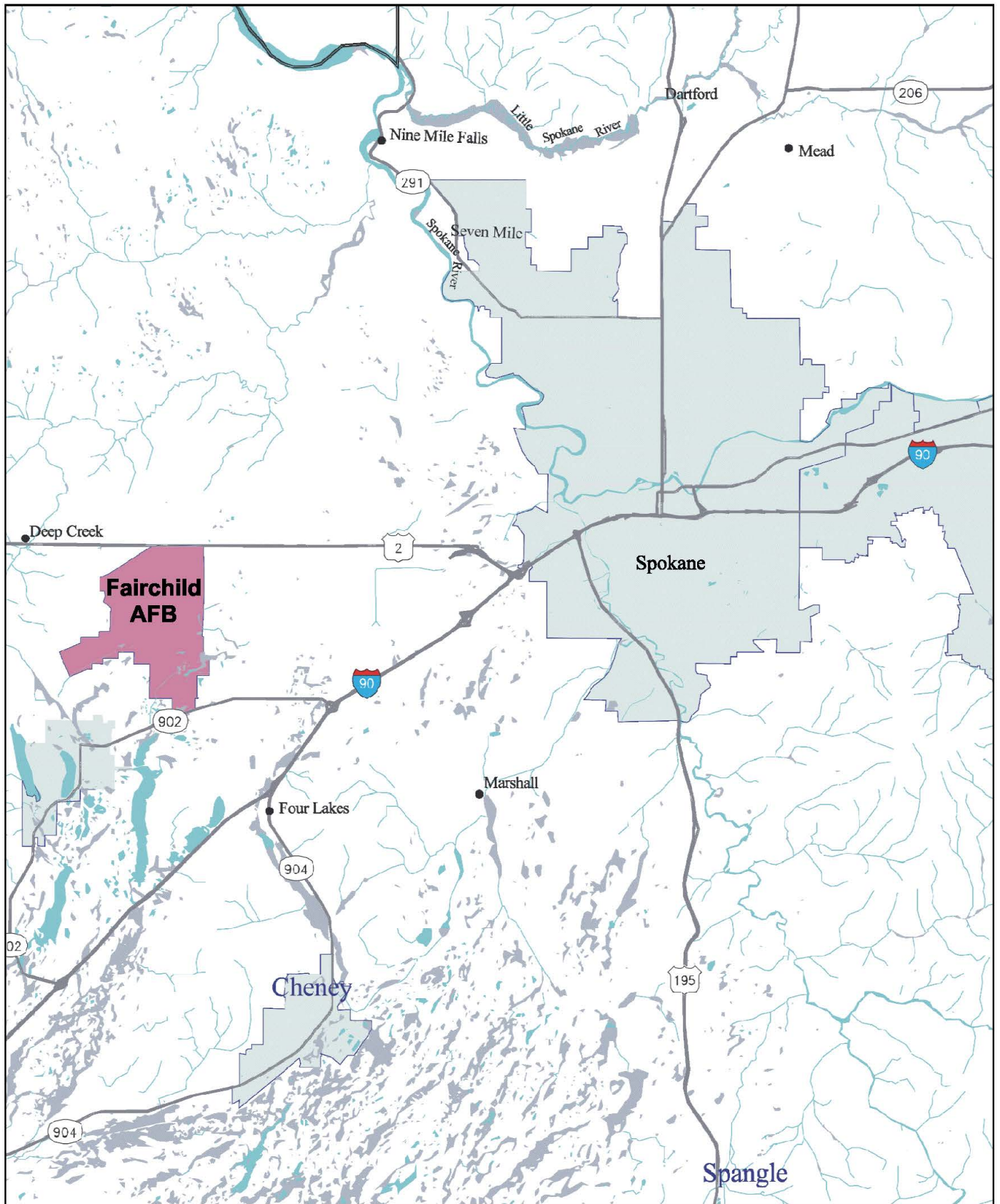
1 Federal Regulations [CFR] Sections 1500-1508) and 32 CFR 989 (*Air Force Environmental*  
2 *Impact Analysis Process*), 15 Jul 99, and amended 28 Mar 01. These federal regulations  
3 establish both the administrative process and substantive scope of the environmental impact  
4 evaluation designed to ensure that deciding authorities have a proper understanding of the  
5 potential environmental consequences of a contemplated course of action. The CEQ  
6 regulations require that an environmental assessment (EA):

- 7 • Briefly provide evidence and analysis to determine whether the Proposed Action might  
8 have significant effects that would require preparation of an environmental impact  
9 statement (EIS). If analysis determines that the environmental effects would not be  
10 significant, a finding of no significant impact (FONSI) will be prepared;
- 11 • Facilitate the preparation of an EIS, when required; or
- 12 • Aid an agency's compliance with NEPA when no environmental impact statement is  
13 necessary.

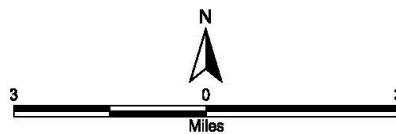
14 The EA will assess the demolition of the proposed central steam plant and associated  
15 facilities at Fairchild AFB. This EA identifies, describes, and evaluates the potential  
16 environmental impacts that may result from implementation of the Proposed Action as well as  
17 possible cumulative impacts from other reasonably foreseeable actions planned for the Base.  
18 The EA also will identify required environmental permits relevant to the Proposed Action. As  
19 appropriate, the affected environment and environmental consequences of the Proposed Action  
20 and No Action Alternative may be described in terms of site-specific descriptions or regional  
21 overview. Finally, the EA will identify mitigation measures to prevent or minimize  
22 environmental impacts, if required.

23 The following biophysical resources will be assessed in the EA: air quality; noise;  
24 hazardous waste; biological resources; cultural resources; infrastructure and utilities (solid  
25 waste management); environmental management (asbestos and lead-based paint); and  
26 environmental justice. The following resources are not evaluated in this EA (followed by a  
27 rationale for not evaluating each subject):

28 **Geologic Resources.** No construction would be required for the Proposed Action. The  
29 site of the central steam plant is located in a portion of the Base that has been disturbed and  
30 altered by previous activities. Demolition of the facilities would not result in any substantial  
31 changes to physiographic features. No changes in site elevation would be required and  
32 alteration of ground surfaces would be minimal. Earthwork would be planned and conducted  
33 in a manner to minimize duration of exposure of unprotected soils. Work would be conducted  
34 in accordance with best management practices for erosion control. Landscaping of exposed  
35 surfaces following completion of demolition would minimize the potential for erosion. For  
36 these reasons, no geologic, physiographic, or soil impacts would be anticipated from the  
37 proposed activities and soil resources are not assessed in this EA.



**Fairchild Air Force Base**



**Location Map  
Fairchild AFB**

**Figure 1-1**

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1        **Biological Resources.** The site of the central steam plant is within the developed,  
2 maintained area of the Base. The site is characterized by an extant, highly modified and  
3 disturbed landscape. The Proposed Action would result in the loss of ruderal/non-native  
4 grassland vegetation with low biological value. No construction would be required for the  
5 Proposed Action. Demolition of structures on the site would not substantially change habitat  
6 for plant or animal species. Demolition activities would not result in any impacts to threatened  
7 or endangered species that occur on Fairchild AFB. There are no wetlands located in the area  
8 of the central steam plant. For these reasons, no impacts to biological resources would be  
9 anticipated from the proposed activities and biological resources are not assessed in this EA.

10       **Water Resources and Floodplains.** No water features are in or adjacent to the central  
11 steam plant. The water table below the Base is 10 to 20 feet below ground surface, and none of  
12 the demolition activity is anticipated to occur at this depth. None of the structures to be  
13 demolished would be located within or adjacent to the 100- or 500-year floodplain (no  
14 floodplains are located on Fairchild AFB). Standard erosion control measures to prevent storm  
15 water pollution would be incorporated into facility demolition and design to minimize soil  
16 disturbance, and prevent erosion and sedimentation, at the work site. Measures to prevent  
17 discharge of contaminants into surface waters would be followed during demolition. For these  
18 reasons, no surface water, groundwater, or floodplain impacts would be anticipated; therefore,  
19 these resources are not assessed in this EA.

20       **Infrastructure and Utilities.** There would be no change in the number of personnel  
21 authorizations at Fairchild AFB as a result of the proposed activities. Therefore, there would  
22 be no long-term change in water consumption or wastewater generation from the current levels.  
23 It is likely water would be applied for dust suppression during demolition. However, the  
24 amount of area that would be affected by demolition would be small (approximately 4 acres  
25 total) and water application would be limited during the approximate 12-month demolition  
26 period (maximum). The amount of water that would be applied would be minor when  
27 compared to current water system use and water application would not be long-term. The  
28 storm water from the additional impervious cover would be minimal when compared to the  
29 current storm water runoff at the Base. For these reasons, no water, wastewater, or storm water  
30 system impacts would be anticipated.

31       During demolition, only a temporary and localized increase in demolition-related traffic  
32 is expected. Impacts to transportation systems would not be considered significant. The  
33 Proposed Action would result in no change to traffic on the Base because the central steam  
34 plant is currently non-operational. For these reasons, the infrastructure and utilities assessed in  
35 this EA is limited to solid waste management.

36       **Land Use.** Fairchild AFB is surrounded by agricultural land uses. No changes to  
37 existing or future off-Base land use would result. The only change to on-Base land use would  
38 be a conversion of industrial land into vacant/open space, which would be considered a  
39 beneficial effect of the Proposed Action. The Proposed Action would not require the  
40 acquisition of any private property. Demolition of the non-operational central steam plant and  
41 associated facilities would be consistent with existing and future land use plans and programs

1 identified in the Fairchild AFB General Plan. For these reasons, land use is not assessed in this  
2 EA.

3 **Safety and Health.** The proposed demolition of the central steam plant would not result  
4 in any increase in safety or occupational health risks. The existing plant is not operational and  
5 currently poses a minimal safety risk. Demolition of the facilities would be conducted in  
6 accordance with applicable worker safety requirements. For these reasons, safety and health  
7 are not assessed in this EA.

8 **Socioeconomic Resources.** There would be no change in the number of personnel  
9 authorizations at Fairchild AFB as a result of the proposed activities. Thus, no long-term  
10 changes would be anticipated to area population, housing requirements, school enrollment, or  
11 economic factors (*i.e.*, sales volume, income, or employment). It is not anticipated that  
12 demolition workers would relocate to the Spokane area as a result of the proposed activities.  
13 Thus, there would be no short-term impacts to area population, housing requirements, or school  
14 enrollment. No change to economic factors from the proposed demolition activities or long-  
15 term operation would be expected. For these reasons, socioeconomic resources are not  
16 assessed in this EA.

17 **Aesthetics.** Potential land use after demolition would be in accordance with the Fairchild  
18 AFB Architectural Compatibility Guide that ensures aesthetic compatibility with objectives of  
19 the Base General Plan. For these reasons, aesthetics is not assessed in this EA.

20 **Environmental Justice.** Executive Order 12898, *Federal Actions to Address*  
21 *Environmental Justice in Minority Populations and Low-Income Populations*, was issued by  
22 the President on February 11, 1994. The E.O. requires each federal agency to make achieving  
23 environmental justice part of its mission by identifying and addressing, as appropriate,  
24 disproportionately high and adverse human health or environmental effects of its programs,  
25 policies, and activities on minority populations and low-income populations. Based on the  
26 analysis conducted for this EA, it is determined that activities associated with the Proposed  
27 Action and No Action Alternative would not impose adverse environmental effects on adjacent  
28 populations. Therefore, no disproportionately high and adverse effects would occur to minority  
29 and low-income populations.

30 Baseline conditions to be used for environmental evaluation in the EA are assumed to be  
31 Fiscal Year 2002 (FY02). However, if FY02 data are not available, the most recent  
32 information will be used. It is estimated that the Proposed Action would require approximately  
33 12 months for completion.

## 34 **1.5 APPLICABLE REGULATORY REQUIREMENTS**

35 Numerous construction projects would be accomplished under either the Proposed  
36 Action. The demolition contractor for the action would prepare and implement a Storm Water  
37 Pollution Prevention Plan (SWPPP) to ensure compliance with Clean Water Act requirements  
38 to ensure water quality is not degraded.



## 1.6 ORGANIZATION OF THE DOCUMENT

This EA is organized into seven chapters and one appendix.

*Chapter 1* Contains a statement of the need for the action; objectives for the action; scope of the environmental review; presentation of the applicable regulatory requirements; and, the organization of the EA.

*Chapter 2* Details the proposed alternatives; presents information on past and reasonably foreseeable future actions; identifies the preferred alternative; and, summarizes the environmental impacts for each alternative.

*Chapter 3* Contains a general description of the biophysical resources and baseline conditions that potentially could be affected by the Proposed Action or No Action Alternative.

*Chapter 4* Describes the environmental consequences of the Proposed Action and the No Action Alternative, identifies potential cumulative impacts and mitigation for impacts determined to be significant.

*Chapter 5* Lists preparers of this document.

*Chapter 6* Lists the persons and agencies consulted during preparation of this EA.

*Chapter 7* Lists the sources of the information used in preparation of this EA.

*Appendix A* Air Force Form 813

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## CHAPTER 2 DESCRIPTION OF THE ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This chapter has seven sections: introduction; selection criteria for alternatives; alternatives considered including the No Action Alternative; description of proposed alternatives; descriptions of past and reasonably foreseeable future actions at Fairchild AFB; identification of the preferred alternative; and, comparison of environmental effects of all alternatives.

### 2.1 INTRODUCTION

The Air Force is proposing to demolish the central steam plant and associated facilities on Fairchild AFB. The central steam plant and associated equipment are no longer in use. The Base currently obtains heating steam from individual gas fired and/or hot water heaters for each facility that was formerly served by the central steam plant.

### 2.2 SELECTION CRITERIA FOR ALTERNATIVES

The Air Force identified selection criteria for alternatives during the initial study phase of the project. The following summarizes the Air Force selection criteria for demolishing the central steam plant on Fairchild AFB:

- Any alternative must be conducted in an environmentally safe and responsible manner.
- Improvements to the site of the central steam plant must result in improvements to land use in accordance with the General Plan for Fairchild AFB.

### 2.3 ALTERNATIVES CONSIDERED, INCLUDING THE NO ACTION ALTERNATIVE

Using the criteria in Subchapter 2.2, the Air Force developed three potential alternatives, including the No Action Alternative, for the central steam plant and associated facilities at Fairchild AFB. The following sections summarize the alternatives consideration process.

#### 2.3.1 Demolish Central Steam Plant and Associated Facilities (Proposed Action)

The Air Force is proposing to demolish the central steam plant and associated facilities on Fairchild AFB. This action would eliminate the existing, non-operational central steam plant and enable other uses of this site. The existing central steam plant is no longer needed to provide heat on the Base.

### 2.3.2 Refurbish the Central Steam Plant (Alternative Action)

The Air Force considered refurbishing the central steam plant and associated facilities for other industrial uses. It was determined that the cost of refurbishing the facility would exceed the cost of new construction. Because heating systems have already been installed at other locations on the Base, it was determined that refurbishment would not be required at this time. For this reason, this alternative was eliminated from further consideration.

### 2.3.3 No Action Alternative

The Air Force EIAP (32 CFR 989.8(d)) states: "...except in those rare instances where excused by law, the Air Force must always consider and assess the environmental impacts of the "no action" alternative. Under the No Action Alternative, Fairchild AFB would continue to leave the central steam plant as a non-operational building, precluding the use of this site for other purposes. The No Action Alternative would result in no demolition of the central steam plant on Fairchild AFB.

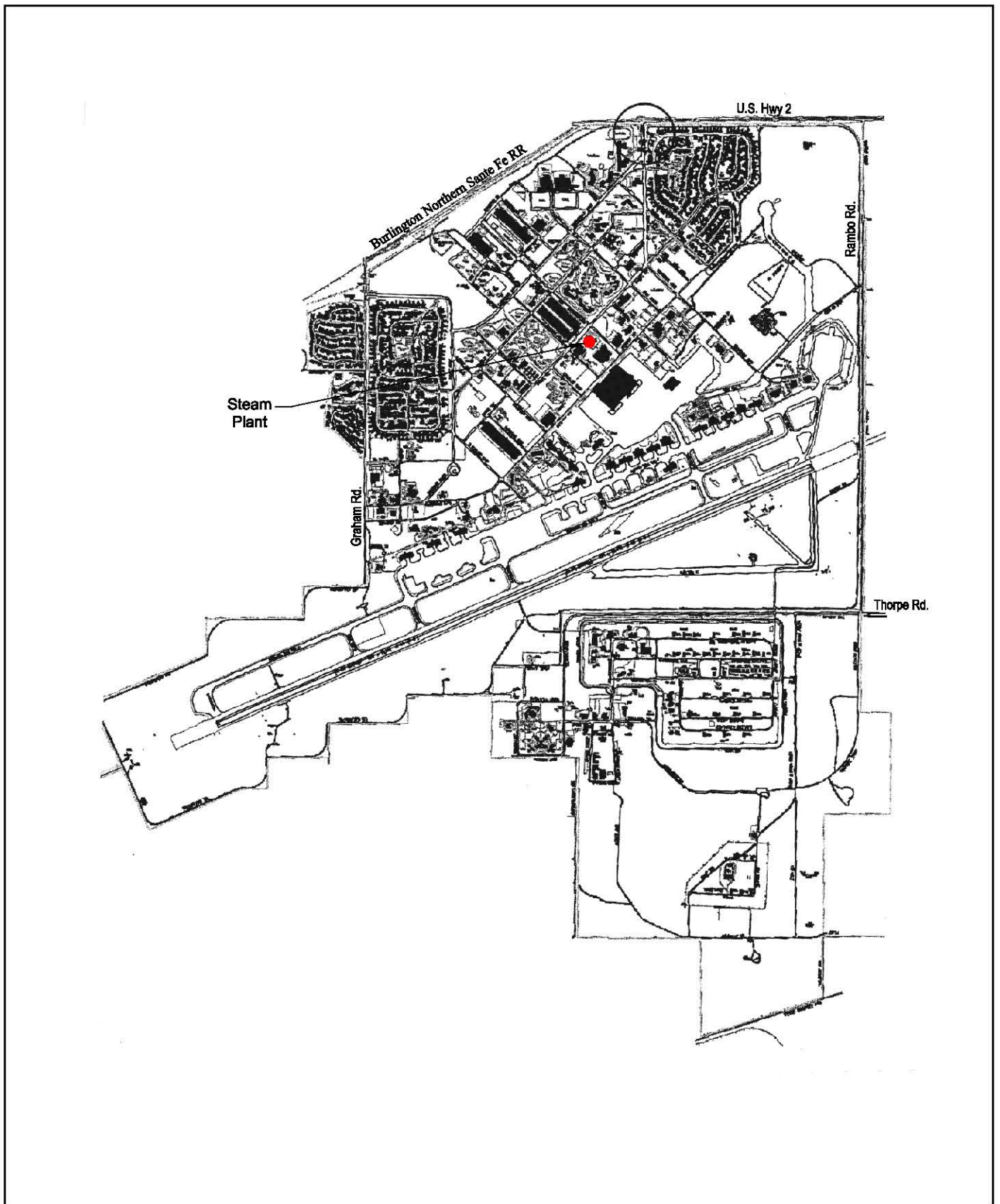
## 2.4 DESCRIPTION OF PROPOSED ALTERNATIVES

### 2.4.1 Proposed Action

The Air Force is proposing to demolish the central steam plant (Bldg 2175) and associated facilities on Fairchild AFB. The central steam plant is located at the southwest corner of West Bong Street and South Doolittle Avenue in the cantonment/industrial portion of Fairchild AFB north of the flightline, as shown on Figure 2-1. Structures to be demolished would include:

- Coal-burning and ash-handling equipment within the central steam plant (Bldg 2175) including, but not limited to, coal pulverizers, weigh belt feeders, coal crusher with conveyor and dust collector, ash handling system, and steam-driven vacuum at the top of the steam plant;
- The spray dryer absorber (SDA)/baghouse steel structures, concrete exhaust stack, connecting piping between the steam plant and SDA/baghouse; all ash-handling equipment; and,
- Ash slurry system equipment; and, all ancillary equipment within the facility.

The Proposed Action would also result in the removal and reuse of 112 tons of pebble lime and the removal of an underground tank. The pebbled lime is stored in a baghouse outside the building, and would be containerized prior to removal from the building. Removal of the tank would be conducted in accordance with Washington Administrative Code (WAC) Chapter 173-360, Underground Storage Tank Regulations.

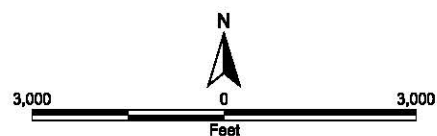


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### Fairchild Air Force Base

#### LEGEND

- Steam Plant



### Location of Steam Plant on Fairchild AFB

Figure 2-1

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Prior to demolition activities, the Air Force would conduct a physical survey for asbestos-containing materials (ACM) and lead-based paint (LBP) on the site. Non-friable ACM would be abated prior to demolition. Removal of ACM and LBP would be conducted in accordance with applicable regulations and in compliance with the Asbestos Management Plan and Lead Base-Paint Management Plan.

No replacement structures would be constructed on the site. The land would be landscaped (i.e., dry land seeded) to match surrounding areas, and this site would become available for other uses. Landscaping would be conducted in accordance with requirements defined in the Landscaping Plan included in the Integrated Natural Resources Management Plan for Fairchild AFB.

A total of 49,488 square feet of structures would be demolished. It is anticipated that demolition at each building would occur sequentially. Demolition would include removal of piping and associated infrastructure connections to existing buildings on the southern corner of West Bong Street and South Doolittle Avenue. The asphalt parking lot for the existing central steam plant would also be demolished. The total area to be cleared is approximately four acres. Demolition activities, including clearing and landscaping, would be expected to occur over a 12-month period.

The demolition contractor would be responsible for ensuring that noise levels do not exceed applicable standards. The demolition contractor would be responsible for determining if any hearing protection or other mitigation measures are required.

#### **2.4.2 No Action Alternative**

The No Action Alternative would result in no demolition of the central steam plant and associated structures on Fairchild AFB. These existing structures would remain in their current condition. The Air Force would be required to provide periodic inspection and maintenance on these non-operational facilities that would remain in the Base inventory of buildings. The No Action Alternative would preclude any improvements to land use or aesthetic quality at this site.

### **2.5 DESCRIPTION OF PAST AND REASONABLY FORESEEABLE FUTURE ACTIONS**

Complete environmental impact analysis of the Proposed Action and alternatives must consider cumulative impacts due to other actions. A cumulative impact, as defined by the CEQ (40 CFR 1508.7), is the “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of which agency (federal or non-federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

The Air Force has identified past and reasonably foreseeable actions that could occur on Fairchild AFB. The only project that would occur during the same time period as the Proposed Action is the anti-terrorism/force protection gate construction and improvements.

The construction projects that would support basing of the 767 aircraft at Fairchild AFB have not been identified at this time and would occur after the demolition period of the Proposed Action. These projects are identified in Table 2-1 and described herein.

**Table 2-1 Cumulative Projects, Fairchild AFB**

Project	Size (Square Feet)	Start Date	Duration
Demolish/Construct Elementary School	118,656	FY03	12 months
Add/Alter Main Gate	1,220	FY03	4 months
Anti-Terrorism/Force Protection Gate Improvements	665,844	FY03	36 months
767 Aircraft Basing Construction Projects	NA	FY06	36 months
Total	785,720	NA	NA

Note: Size depicts total surface area for the facility. Start date reflected as FY. NA=not available at this time.

**Demo/Construct Elementary School.** The Air Force is in the process of constructing a replacement elementary school near the Galena Station Housing Area on Fairchild AFB. Demolition of the elementary school southwest of the Main Gate would occur in FY03.

**Add/Alter Main Gate.** To improve safety and security of the Main Gate during increased security conditions, the Air Force is planning to construct a weather canopy and guard shelters at the Main Gate, and alter the inbound roadway to accommodate an additional lane. This project will include utilities, paving, communications and other site work. An EA and FONSI for this action were completed in 2002 (USAF 2002b).

**Anti-Terrorism/Force Protection Gate Improvements.** As part of the Air Force anti-terrorism/force protection initiative, roadway improvements and construction are planned for the Main Gate, Graham Gate, Rambo Gate and Gate 20 on Fairchild AFB. To further reduce traffic during morning peak period, the Air Force would also make improvements to signage, lighting, speed control and other design considerations such as tandem processing islands, vehicle arrest systems, and gate security systems.

**767 Aircraft Basing Construction Projects.** In support of the planned basing of up to thirty-two 767 aircraft at Fairchild AFB, facility construction projects in the flightline and operational support areas are planned.

## **2.6 IDENTIFICATION OF THE PREFERRED ALTERNATIVE**

The preferred alternative is the Proposed Action, demolition of coal-burning and ash-handling equipment within the central steam plant (Bldg 2175).

## **2.7 COMPARISON OF ENVIRONMENTAL EFFECTS OF ALL ALTERNATIVES**

Table 2-2 summarizes the environmental impacts of the Proposed Action and No Action Alternative.



**Table 2-2 Summary of Environmental Impacts for the Proposed Action and No Action Alternative**

<b>Resource (Applicable Subchapter)</b>	<b>Proposed Action</b>	<b>No Action Alternative</b>
Mission (4.1)	The Proposed Action would improve the Base's ability to accomplish its mission.	No change to the mission would result.
Noise (4.2)	Demolition noise may have a short-term impact. Temporary interior noise levels from 57 to 62 dB could annoy less than 15 percent of nearby persons and cause temporary disruption of speech during the noise event.	No significant impacts occur from baseline activities.
Air Quality (4.3)	The greatest increase of any of the criteria air pollutants would be 4.68 tons per year (tpy) for particulate matter (PM <sub>10</sub> ), which equates to 0.0671 percent of the baseline PM <sub>10</sub> emissions within the air quality control region (AQCR). These emissions are not considered significant, and an USEPA Conformity Determination would not be required.	No significant impacts occur from baseline activities
Hazardous Wastes and Hazardous Materials (4.4)	The contractor would comply with all regulatory guidance for the use and disposal of hazardous materials during demolition activities. The 112 tons of pebble lime would be reused or recycled.	No significant impacts occur from baseline activities
Cultural Resources (4.5)	<p><b>Archaeological Resources.</b> No NRHP-eligible archaeological resources are located within or adjacent to the Proposed Action region of influence (ROI) for Fairchild AFB. The probability is low that undisturbed, significant archaeological resources, including human graves, will be discovered on Fairchild AFB during demolition. The action would be managed in accordance with the Fairchild AFB ICRMP including procedures that must be followed in the event of inadvertent discovery of cultural resources.</p> <p><b>Historical Resources.</b> The central steam plant (Bldg 2175) is not eligible for listing on the NRHP. The Proposed Action would not result in demolition or modifications to any historic properties or structures. The Proposed Action would not result in impacts to historical resources.</p> <p><b>Native American Concerns.</b> No Native American concerns have been identified for Fairchild AFB. The Proposed Action would be implemented in accordance with the Fairchild AFB ICRMP, which specifies notification procedures applicable to Native American groups. With compliance to the ICRMP, the Proposed Action would not result in impacts to Native American concerns.</p>	No significant impacts occur from baseline activities

**Table 2-2 Summary of Environmental Impacts for the Proposed Action and No Action Alternative (Cont'd)**

Resource (Applicable Subchapter)	Proposed Action	No Action Alternative
Utilities and Infrastructure (4.6)	<b>Solid Waste Management.</b> Demolition debris disposal would not result in impacts to the remaining capacity of the permitted off-Base landfill. Solid waste generated by personnel would not change as a result of the Proposed Action. Impacts from solid waste disposal would not be considered significant.	No significant impacts occur from baseline activities
Environmental Management (4.7)	The activities associated with the Proposed Action would be accomplished in accordance with existing directives and would have minimal impact on achieving pollution prevention goals. Any negative impact will be offset by diverting, reusing, and recycling metals and as much debris as possible to minimize disposal of solid waste. The demolition contractor would be responsible for asbestos-containing material (ACM) and lead-based paint (LBP) removal, which would be accomplished in accordance with existing guidance. Facility demolition activities would be coordinated with the Base Environmental Flight and Bioenvironmental Engineering to ensure that demolition would avoid interference with any ongoing Environmental Restoration Program (ERP) investigation and remediation work and would not worsen the condition of any site.	No significant impacts occur from baseline activities

## CHAPTER 3 DESCRIPTION OF THE AFFECTED ENVIRONMENT

### 3.1 MISSION

Fairchild AFB is home to the 92<sup>nd</sup> Air Refueling Wing whose mission is to provide immediately responsive KC-135 air refueling and airlift support to the United States and friendly forces. The mission of Fairchild AFB is to ensure the highest standards in safety, training, and combat capability. Tenant organizations at Fairchild AFB include the 336<sup>th</sup> Training Group, 36<sup>th</sup> Rescue Flight, 141<sup>st</sup> Air Refueling Wing and 2<sup>nd</sup> Support Squadron (Air Combat Command).

### 3.2 NOISE

#### 3.2.1 Background Information

Noise is defined as sound that is undesirable because it interferes with speech and hearing, is intense enough to damage hearing, or is otherwise annoying. Noise levels often change with time. To compare sound levels over different time periods, several descriptors have been developed that take into account this time-varying nature. These descriptors are used to assess and correlate the various effects of noise on humans.

Different sounds have different frequency contents. Because the human ear is not equally sensitive to sound at all frequencies, a frequency-dependent adjustment, called A-weighting and expressed as dBA, has been devised to measure sound similar to the way the human hearing system responds. The adjustments in amplitude, established by the American National Standards Institute (ANSI S1.4 1983), are applied to the frequency content of the sound. For example, 65 dBA is equivalent to normal speech at a distance of 3 feet.

An outdoor day-night average sound level (DNL) of 75 dBA is considered the threshold above which the risk of hearing loss is evaluated. Following guidelines recommended by the Committee on Hearing, Bioacoustics, and Biomechanics, the average change in the threshold of hearing for people exposed to DNL equal to or greater than 75 dBA was evaluated. Results indicated that an average of 1 dBA hearing loss could be expected for people exposed to DNL equal to or greater than 75 dBA. For the most sensitive 10 percent of the exposed population, the maximum anticipated hearing loss would be 4 dBA. These hearing loss projections must be considered conservative as calculations are based on an average daily outdoor exposure of 16 hours (7:00 a.m. to 10:00 p.m.) over a 40-year period. It is doubtful any individual would spend this amount of time outdoors within the DNL equal to or greater than 75 dBA noise exposure area (USAF 1997).

#### 3.2.2 Existing Noise Levels

Aircraft operations are the primary source of noise at Fairchild AFB. Aircraft activities include aircraft and aircraft maintenance operations. During periods of no flying activity, noise results primarily from aircraft maintenance and shop operations, ground traffic

movement, occasional construction, and similar sources. This noise is almost entirely restricted to the Base itself and is comparable to sounds that occur in typical communities. It is during periods of aircraft ground or flight activity that the noise environment changes.

Ambient noise in the area of the central steam plant would range from approximately 50 dBA (quiet urban daytime) to about 70 dBA (noisy urban daytime) when aircraft operations are not occurring. Interior noise levels in area buildings would be reduced by approximately 18 to 27 dB due to the noise level reduction (NLR) properties of the structures' construction materials (USDOT 1992).

### **3.3 AIR QUALITY**

#### **3.3.1 Air Pollutants and Regulations**

Air quality in any given region is measured by the concentration of various pollutants in the atmosphere, typically expressed in units of parts per million (ppm) or in units of micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Air quality is not only determined by the types and quantities of atmospheric pollutants, but also by surface topography, size of the air basin, and by prevailing meteorological conditions.

The Clean Air Act (CAA), as amended in 1977 and 1990, provides the basis for regulating air pollution to the atmosphere. Different provisions of the CAA apply depending on where the source is located, which pollutants are being emitted, and in what amounts. The CAA required the USEPA to establish ambient ceilings for certain criteria pollutants. These criteria pollutants are usually referred to as the pollutants for which the USEPA has established National Ambient Air Quality Standards (NAAQS). The ceilings were based on the latest scientific information regarding the effects a pollutant may have on public health or welfare. Subsequently, the USEPA promulgated regulations that set NAAQS. Two classes of standards were established: primary and secondary. Primary standards define levels of air quality necessary, with an adequate margin of safety, to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards define levels of air quality necessary to protect public welfare (e.g., decreased visibility, damage to animals, crops, vegetation, wildlife, and buildings) from any known or anticipated adverse effects of a pollutant.

Air quality standards are currently in place for six pollutants or "criteria" pollutants: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), sulfur oxides (SO<sub>x</sub>, measured as sulfur dioxide [SO<sub>2</sub>]), lead (Pb), and particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (PM<sub>10</sub>). There are many suspended particles in the atmosphere with aerodynamic diameters larger than 10 micrometers. The collective of all particle sizes is commonly referred to as total suspended particulates (TSP). TSP is defined as particulate matter as measured by the methods outlined in 40 CFR Part 50, Appendix B. The NAAQS are the cornerstone of the CAA. Although not directly enforceable, they are the benchmark for the establishment of emission limitations by the states for the pollutants USEPA determines may endanger public health or welfare.

Ozone (ground-level ozone), which is a major component of “smog,” is a secondary pollutant formed in the atmosphere by photochemical reactions involving previously emitted pollutants or precursors. Ozone precursors are mainly nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs). NO<sub>x</sub> is the designation given to the group of all oxygenated nitrogen species, including nitric oxide (NO), NO<sub>2</sub>, nitrous oxide (N<sub>2</sub>O), and others. However, only NO, NO<sub>2</sub>, and N<sub>2</sub>O are found in appreciable quantities in the atmosphere. VOCs are organic compounds (containing at least carbon and hydrogen) that participate in photochemical reactions and include carbonaceous compounds except metallic carbonates, metallic carbides, ammonium carbonate, carbon dioxide (CO<sub>2</sub>), and carbonic acid. Some VOCs are considered non-reactive under atmospheric conditions and include methane, ethane, and several other organic compounds. Ozone is a secondary pollutant and is not directly emitted from common emissions sources. Therefore, to control ozone in the atmosphere, the effort is made to control NO<sub>x</sub> and VOC emissions. For this reason, NO<sub>x</sub> and VOCs emissions are calculated and reported in emission inventories.

The CAA does not make the NAAQS directly enforceable. However, the Act does require each state to promulgate a State Implementation Plan (SIP) that provides for “implementation, maintenance, and enforcement” of the NAAQS in each Air Quality Control Region (AQCR) in the state. The CAA also allows states to adopt air quality standards more stringent than the federal standards.

The Washington Department of Ecology (WDOE) administers the state of Washington pollution program under authority of Chapter 43.21A, Department of Ecology, Revised Code of Washington. The Spokane County Air Pollution Control Agency (SCAPCA) has regulatory authority for emissions in the Fairchild AFB area. Table 3-1 lists national and Washington state ambient air quality standards.

### **3.3.2 Regional Air Quality**

The fundamental method by which the USEPA tracks compliance with the NAAQS is the designation of a particular region as “attainment” or “nonattainment”. Based on the NAAQS, each state is divided into three types of areas for each of the criteria pollutants:

- areas that are in compliance with the NAAQS (attainment);
- areas that do not meet the ambient air quality standards (nonattainment); and,
- areas where a determination of attainment/nonattainment cannot be made due to a lack of monitoring data (unclassifiable – treated as attainment until proven otherwise).

**Table 3-1 National and State Ambient Air Quality Standards**

Criteria Pollutant	Averaging Time	Primary NAAQS <sup>a,b,c</sup>	Secondary NAAQS <sup>a,b,d</sup>	Washington Standards <sup>a,b</sup>
Carbon Monoxide	8-hour 1-hour	9 ppm (10 mg/m <sup>3</sup> ) 35 ppm (40 mg/m <sup>3</sup> )	No standard No standard	9 ppm (10 mg/m <sup>3</sup> ) 35 ppm (40 mg/m <sup>3</sup> )
Lead	Quarterly	1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>
Nitrogen Dioxide	Annual	0.05 ppm (100 µg/m <sup>3</sup> )	0.05 ppm (100 µg/m <sup>3</sup> )	0.05 ppm (100 µg/m <sup>3</sup> )
Ozone	1 hour <sup>e</sup>	0.12 ppm (235 µg/m <sup>3</sup> )	0.12 ppm (235 µg/m <sup>3</sup> )	0.12 ppm (235 µg/m <sup>3</sup> )
PM <sub>10</sub>	Annual 24-hour	50 µg/m <sup>3</sup> 150 µg/m <sup>3</sup>	50 µg/m <sup>3</sup> 150 µg/m <sup>3</sup>	50 µg/m <sup>3</sup> 150 µg/m <sup>3</sup>
Total Suspended Particulates	Annual 24-hour	No standard No standard	No standard No standard	60 µg/m <sup>3</sup> 150 µg/m <sup>3</sup>
Sulfur Oxides (measured as SO <sub>2</sub> )	Annual 24-hour 3-hour 1-hour <sup>e</sup> 1-hour <sup>f</sup>	0.03 ppm (80 µg/m <sup>3</sup> ) 0.14 ppm (365 µg/m <sup>3</sup> ) No standard No standard No standard	No standard No standard 0.50 ppm (1,300 µg/m <sup>3</sup> ) No standard No standard	0.02 ppm (55 µg/m <sup>3</sup> ) 0.10 ppm (265 µg/m <sup>3</sup> ) No standard 0.25 ppm (660 µg/m <sup>3</sup> ) 0.40 ppm (1,050 µg/m <sup>3</sup> )

PM<sub>10</sub> Particles with aerodynamic diameters less than or equal to a nominal 10 micrometers

<sup>a</sup> National and Washington state standards, other than those based on an annual or quarterly arithmetic mean, are not to be exceeded more than once per year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is less than or equal to one.

<sup>b</sup> The NAAQS and Washington state standards are based on standard temperature and pressure of 25 degrees Celsius and 760 millimeters of mercury, respectively. Units of measurements are parts per million (ppm) and micrograms per cubic meter (µg/m<sup>3</sup>).

<sup>c</sup> National Primary Standards: The levels of air quality necessary to protect the public health with an adequate margin safety. Each state must attain the primary standards no later than three years after the state implementation plan is approved by the USEPA.

<sup>d</sup> National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after the state implementation plan is approved by the USEPA.

<sup>e</sup> Not to be exceeded more than twice in seven consecutive days.

<sup>f</sup> Not to be exceeded more than once per year throughout the state of Washington and never to be exceeded within the Spokane County Air Pollution Control Agency region.

Generally, areas in violation of one or more of the NAAQS are designated nonattainment and must comply with stringent restrictions until all of the standards are met. In the case of O<sub>3</sub>, CO, and PM<sub>10</sub>, USEPA divides nonattainment areas into different categories, depending on the severity of the problem in each area. Each nonattainment category has a separate deadline for attainment and a different set of control requirements under the SIP. According to federal regulations (40 CFR 81.341), all 13 counties in the

AQCR 62 are nonattainment for PM<sub>10</sub>, unclassifiable/attainment for CO and ozone, and cannot be classified or better than national standards for NO<sub>2</sub> and SO<sub>2</sub>.

The EPA General Conformity Rule (58 Federal Register 63214 [November 30, 1993] and codified at 40 CFR Part 93, Subpart B) establishes a process for analyzing and determining whether a proposed project in a nonattainment area conforms to the SIP and federal standards.

### 3.3.3 Baseline Air Emissions

An air emissions inventory is an estimate of total mass emissions of pollutants generated from a source or sources over a period of time, typically a year. Accurate air emissions inventories are needed for estimating the relationship between emissions sources and air quality. Quantities of air pollutants are generally measured in pounds (lb) per year or tons per year (tpy). All emission sources may be categorized as either mobile or stationary emission sources. Stationary emission sources may include boilers, generators, fueling operations, industrial processes, and burning activities, among others. Mobile emission sources typically include vehicle operations.

The calendar year (CY) 1999 air emissions inventory summary for the AQCR 62, which includes reported permitted stationary and mobile air emission sources, is presented in Table 3-2.

**Table 3-2 Baseline Air Emissions**

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	NO <sub>x</sub> (tpy)	SO <sub>x</sub> (tpy)	PM <sub>10</sub> (tpy)
AQCR CY99 Totals	26,547	1,276	2,508	6,893	6,970

Note: VOC is not a criteria air pollutant. However, VOC is reported because, as an ozone precursor, it is a controlled pollutant.

Source: AIRData 2003.

## 3.4 HAZARDOUS WASTES AND HAZARDOUS MATERIALS

Unless otherwise exempted by Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) regulations, Resource Conservation and Recovery Act (RCRA), Subtitle C (40 CFR Parts 260 through 270) regulations are administered by the USEPA and are applicable to the management of hazardous wastes. Hazardous waste must be handled, stored, transported, disposed, or recycled in accordance with these regulations.

The storage, handling, recycling, and disposal of hazardous wastes are subject to regulations under the RCRA act of 1976 and its 1988 amendments. RCRA regulatory authority has been delegated to the state by the USEPA. Fairchild AFB has a Hazardous Waste Management Plan, which fulfills the requirements in Title 40, CFR Parts 260-270 and the CCR, Title 22, Parts 66264.13 and 662268.7(a), which establishes procedures to achieve and maintain regulatory compliance regarding accumulation, transportation, and disposal of hazardous waste.

### 3.5 CULTURAL RESOURCES

Cultural resources include prehistoric and historical archaeological sites, buildings, structures, districts, artifacts, objects, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, or religious purposes. Pursuant to Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and its implementing regulations at 36 CFR 800, federal agencies must take into consideration the potential effect of an undertaking on "historic properties," which refers to cultural resources listed in, or eligible for inclusion in, the National Register of Historic Places (NRHP). Sites not yet evaluated are considered potentially eligible for inclusion in the NRHP and, as such, are afforded the same regulatory consideration as nominated properties.

Numerous laws and regulations require federal agencies consider the effects of a Proposed Action on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the federal agency proposing the action, and prescribe the relationship between other involved agencies (e.g., State Offices of Historic Preservation, the Advisory Council on Historic Preservation).

Only those potential historic properties determined to be significant under cultural resource legislation are subject to protection or consideration by a federal agency. The quality of significance is considered in terms of applicability of the NRHP criteria. Significant cultural resources, either prehistoric or historic in age, are referred to as "historic properties."

Cultural resources on Air Force installations are managed in accordance with environmental laws that include: AFI 32-7065, *Cultural Resources Management*; 32 CFR 989; Executive Order 11593 of 1971; National Historic Preservation Act of 1966, as amended; Archaeological and Historic Preservation Act (AHPA) of 1974 (Public Law [PL] 93-291); the Archaeological Resources Protection Act (ARPA) of 1979 (PL 96-95); the American Indian Religious Freedom Act (AIRFA) of 1978 (PL 95-341); and, the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (PL 101-601). In addition, any proposed undertaking must comply with the State Historic Preservation Office (SHPO) guidelines for the States of California, Nevada and Oregon.

For this analysis, the Region of Influence (ROI) is synonymous with the Area of Potential Effect (APE), as defined by the NHPA. The ROI for the analysis of cultural resources includes the area of proposed demolition of the central steam plant on Fairchild AFB.

The identification of cultural resources potentially impacted by the Proposed Action was accomplished by reviewing the 2001 Fairchild AFB Integrated Cultural Resources Management Plan (ICRMP) (USAF 2001a).



### 3.5.1 Archaeological Resources

Archaeological resources are prehistoric or historic places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may include some surface deposits and below ground (subsurface) deposits. Prehistoric archaeological resources may include village sites, campsites, lithic scatters, burials, hearths (or hearth features), processing sites, caves, and rock shelters. Historical archaeological resources may include farmsteads, roads, privies, trash deposits and/or middens.

Fairchild AFB was constructed on high, relatively rocky land that was reported to be practically devoid of water. No settler activity is recorded for the Base. Only three houses existed there in 1941 when the land was turned over to the military, and all three houses have been removed. The probability is low that undisturbed, significant archaeological resources, including human graves, will be discovered on Fairchild AFB during future construction (USAF 2001a).

The Fairchild AFB ICRMP Update (USAF 2001a) does not identify any archaeological sites on the Base. Two farmsteads, the Raymond Gee well, and the Silver Lake Water Canal are not considered to be eligible for listing on the NRHP. Two prehistoric archaeological sites have been registered with the Washington State Office of Archaeology and Historic Preservation (OAHP). Both sites are located on outlying annexes and not on the main portion of Fairchild AFB.

### 3.5.2 Historical Resources

For purposes of this analysis, historical resources include buildings and structures, and other physical remains of historic significance that are present above the ground. Historical resources date from the period of initial European contact in this area (*circa* A.D. 1770) and extend into the present. They may include houses, homesteads, farmsteads (and associated support structures or buildings), cabins, forts, schools, bridges, dams, logging sites, military facilities, structures, or buildings, and items of a similar nature.

Historic buildings on Fairchild AFB include Military Era historical resources (World War II-era structures, Vietnam War Era structures, and Cold War Era buildings). One WWII and two Cold War buildings may be eligible for inclusion on the National Register of Historic Places. The central steam plant (Bldg 2175), constructed in 1944, is a permanent building associated with World War II. Bldg 2175 has extensive modification and no longer has the integrity of form required for inclusion on the NRHP (USAF 2001a).

### 3.5.3 Native American Concerns

Two Native American tribes have been identified in the Fairchild AFB area: the Spokane Tribal Business Council and the Coeur d'Alene Tribe. No sites or areas that are considered important to these tribes have been identified on Fairchild AFB. The potential for culturally significant sites appears to be low based on records that indicate lands on the Base were not intensively used by Native Americans. The Fairchild AFB ICRMP indicates that the

Base will be consulting with both tribes to obtain information about any culturally significant sites on the installation (USAF 2001a).

### **3.6 SOLID WASTE MANAGEMENT**

Solid wastes include all waste materials that are neither hazardous nor toxic, and which are normally disposed of by dumping or incineration, or are recycled or recovered. The management of solid (non-hazardous) waste on Fairchild AFB includes the collection and disposal of solid wastes and recyclable material. Demolition and inert wastes generated on Fairchild AFB are transported to an off-Base landfill. Refuse is sent to a waste-to-energy plant.

### **3.7 ENVIRONMENTAL MANAGEMENT**

#### **3.7.1 Pollution Prevention**

The Air Force has taken a proactive and dynamic role in developing a pollution prevention (P2) program to implement the regulatory mandates in the Pollution Prevention Act of 1990; E.O. 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements; E.O. 12873, Federal Acquisition, Recycling, and Waste Prevention; and E.O. 12902 Energy Efficiency and Water Conservation at Federal Facilities. The Air Force P2 Program incorporates the following principles in priority order:

- Generation of hazardous substances, pollutants, or contaminants would be reduced or eliminated at the source whenever feasible (source reduction).
- Pollution that cannot be prevented would be recycled in an environmentally safe manner.
- Disposal, or other releases to the environment, would be employed only as a last resort and would be conducted in an environmentally safe manner, according to regulatory guidance.

AFI 32-7080 provides directives for the Air Force P2 program. The AFI incorporates by reference applicable federal, DoD, and Air Force level regulations and directives for pollution prevention. Each installation incorporates the requirements of AFI 32-7080 into a Pollution Prevention Management Action Plan (P2 MAP). The P2 MAP is used to manage the actions needed to develop and execute an installation's P2 program. P2 MAPs are based on recurring opportunity assessments designed to continually evaluate an installation's success in achieving pollution prevention at the highest level in the hierarchy of action. The P2 MAP incorporates management strategies for meeting the goals of the program elements of the Air Force P2 program. These elements address reduction and elimination of ozone-depleting substances (ODS), USEPA 17 industrial toxics, hazardous waste, solid waste, recyclable materials, and energy conservation.

### 3.7.2 Asbestos

Since the 1950s, asbestos was commonly added to a variety of building materials, including cement to enhance strength. Asbestos containing cement products generally contain Portland cement, aggregate, and asbestos fibers. Asbestos cement products have many uses, including use as pipes for water and wastewater utilities. Serious health effects associated with exposure to airborne asbestos fibers include asbestosis, lung cancer, and mesothelioma. Although the USEPA promulgated a ban on asbestos and phase out of its use in 1989, many materials were being manufactured at that time. Therefore, without a specific cut-off date, the only way to determine the presence or absence of asbestos is through proper sampling and analysis.

Asbestos management at Air Force installations is established in AFI 32-1052, *Facility Asbestos Management*. AFI 32-1052 incorporates by reference applicable requirements of 29 CFR 669 *et seq.*, 29 CFR 1910.1025, 29 CFR 1926.58, 40 CFR 61.140, Section 112 of the CAA, and other applicable AFIs and DoDDs. AFI 32-1052 requires installations to develop an asbestos management plan for the purpose of maintaining a permanent record of the current status and condition of all asbestos-containing material (ACM) in the installation's facility inventory and documenting all asbestos management efforts. In addition, the instruction requires installations to develop an asbestos operating plan that details how the installation would conduct asbestos-related projects. Asbestos is regulated by the USEPA with the authority promulgated under the Occupational Safety and Health Act (OSHA), 29 USC §§ 669 *et seq.* Emissions of asbestos fibers to ambient air are regulated under Section 112 of the CAA.

### 3.7.3 Lead-Based Paint

The Residential Lead-Based Paint (LBP) Hazard Reduction Act of 1992, Subtitle B, Section 408 (commonly called Title X), was passed by Congress on October 28, 1992, and regulates the use and disposal of LBP at federal facilities. Federal agencies are required to comply with all applicable federal, state, interstate, and local laws relating to LBP activities and hazards.

LBP management at Air Force installations is established in the Air Force policy and guidance on LBP in facilities. The policy incorporates by reference the requirements of 29 CFR 1910.1025, 29 CFR 1926, 40 CFR 50.12, 40 CFR 240 through 280, the CAA, PL 102-550, and other applicable federal regulations. This policy requires each installation to develop and implement a facility management plan for identifying, evaluating, managing, and abating LBP hazards.

### 3.7.4 Environmental Restoration Program

The Air Force established the Installation Restoration Program (IRP) in 1983 to identify, characterize, and evaluate past disposal sites and remediate contamination on its installations as needed to control migration of contaminants and potential hazards to ecological resources, human health, and the environment in accordance with CERCLA

requirements. The program has since been renamed the Environmental Restoration Program (ERP). This program has two parts: former IRP sites that are Environmental Restoration Account (ERA)–eligible; and, sites not eligible for ERA but eligible for Environmental Compliance (EC) funds.

A total of 37 IRP sites and two Areas of Concern (AOC) are present on Fairchild AFB. Two of the IRP sites are basewide sites. In addition to the basewide sites, there are four known IRP sites in the vicinity of the central steam plant (Bldg 2175), as summarized in Table 3-3.

**Table 3-3 IRP Sites Near the Central Steam Plant on Fairchild AFB**

Site	Location	Description	Record of Decision
SD-37	Basewide	Basewide Oil/Water Separators (RI/FS)	No
SS-39	Basewide	TCE Orphan Plumes (RI/FS)	No
ST-35	W. Bong St. and S. Foulis Ave.	Bldg 2165, Fuel Transfer Facility (SI-IRA)	No
SW-11	W. Bong St. and S. Foulis Ave	Disposal Area at Warrior Park (IC/NFA)	Yes
IS-3	S. Doolittle Ave. and W. Arnold St.	Reciprocating Engine Test Cell (IC/NFA)	Yes
AOC-1	E. Arnold St. south of central steam plant	Vehicle Maintenance Facility Bldg 2115 (RI/FS)	No

AOC Area of Concern

IC Institutional Controls

RI/FS Remedial Investigation/Feasibility Study

NFA No Further Action Required

SI-IRA Site Investigation – Interim Remedial Action

## CHAPTER 4 ENVIRONMENTAL CONSEQUENCES

### 4.1 MISSION

The activities associated with the Proposed Action would have no direct effect on the ability of the Base to accomplish its mission. Demolition and removal of the central steam plant would provide approximately four acres of vacant land that could become available for other use in the future.

### 4.2 NOISE

An environmental impact analysis related to noise includes the potential impacts on the local population. In considering the basis for evaluating significance of noise impacts, several items were examined, including: 1) the degree to which noise levels generated by construction and aircraft operation activities would be higher than the ambient noise levels; 2) the degree to which there would be annoyance and/or activity interference; and 3) the exposure of noise-sensitive receptors to noise levels above 65 dBA.

#### 4.2.1 Proposed Action

**Demolition Noise.** Assuming that noise from the demolition equipment radiates equally in all directions, the sound intensity would diminish inversely as the square of the distance from the source increases. Table 4-1 shows the anticipated sound pressure levels at a distance of 50 feet for miscellaneous heavy equipment.

**Table 4-1 Heavy Equipment Noise Levels at 50 Feet**

Equipment Type	Number Used <sup>1</sup>	Generated Noise Levels, L <sub>p</sub> (dB) <sup>2</sup>
Bulldozer	1	88
Backhoe (rubber tire)	1	80
Jackhammer	1	92 <sup>3</sup>
Hydraulic Driven Piston Ram	1	105 <sup>4</sup>
Front Loader (rubber tire)	1	80
Crane	1	75
Roller	1	80
Flat Bed Truck (18 wheel)	1	75
Scraper	1	89

1 Estimated number in use at any time

2 L<sub>p</sub> = sound pressure level

3 Parsons, 2003

4 USAF, 2003

dB = decibel

Source: CERL 1978

1 Demolition at the central steam plant and associated facilities would be accomplished as  
2 a result of the Proposed Action. Equipment and vehicles involved in demolition and removal  
3 of debris would generate the primary source of noise from these activities. Demolition noise  
4 would be intermittent and short-term in duration. Typical noise levels generated by these  
5 activities range from 75 to 105 dB at 50 feet from the source.

6 Outdoor noise from construction activity at an occupied building 50 feet from the noise  
7 source could be as high as 75 to 105 dB (see Table 4-1). Noise levels of equipment shown in  
8 Table 4-1 may increase as a result of reflection of noise within the walls surrounding the  
9 steam plant. This noise level could increase by 3, 5 and 6 dB for one, two or three reflective  
10 surfaces, respectively. The noise from construction would be intermittent and last only as  
11 long as the specific equipment is in use.

12 Construction activities could result in temporary periods of vibration at the level of 79  
13 and 112 VdB (vibration level in terms of decibel) from the jackhammer and hydraulic driven  
14 piston ram, respectively, operating at a distance of 25 feet. The vibration levels would be  
15 reduced at the rate of 9 VdB for each doubling of transmission distance. Suggested criteria  
16 for office buildings is 75 VdB for greater than 70 events per day and 83 VdB for less than 70  
17 events per day (USDOT, 1998). It is not expected that the vibration levels from demolition of  
18 the steam plant would exceed these guidelines.

19 Bldg 2170 is within 50 feet of the south wall of the steam plant. The corresponding  
20 interior noise levels during demolition would be reduced by approximately 18 to 27 dB due to  
21 the NLR properties of the building's construction materials (USDOT, 1992). For Bldg 2170,  
22 this noise reduction would be decreased by 5 dB assuming this building was constructed  
23 before implementation of the 1978 Air Force NLR standard. This reduced level of noise  
24 could annoy up to 52 percent of nearby persons and cause temporary disruption of speech  
25 during the noise event. It is assumed that windows of Bldg 2170 would not be open during  
26 demolition work.

27 The steam plant is located within 200 feet of dormitory facilities. The interior noise  
28 levels of the dormitories may experience temporary periods of increased noise during the  
29 demolition activities. The projected noise level would not be expected to exceed the interior  
30 day-night averaged noise level (or  $L_{dn}$ ) of 45 dB, a suggested criterion for interior noise  
31 levels. While the noise levels shown on Table 4-1 are not based on averaged conditions,  
32 interior noise levels would be decreased based on the distance to the dormitories. While  
33 temporary annoyance may result, it is not expected that the DNL 75 dBA noise level standard  
34 would be exceeded at the dormitory location. It is also not expected that the interior noise  
35 level of 85 dBA would be exceeded during any 8-hour period.

36 The steam plant is also located in an area of occupied, industrial buildings and offices. The  
37 Air Force time-weighted average (TWA) for noise levels are based on continuous noise  
38 exposure limits of 85 and 90 dBA over an 8-hour period. The potential for hearing loss  
39 involves direct exposure on a regular, continuing, long-term basis to noise levels above 85  
40 dBA. As stated in Section 3.3.2, hearing loss projections are based on an average daily  
41 outdoor exposure of 8 hours over a 40-year period. It is anticipated the demolition activities

would occur between 7:30 a.m. and 4:00 p.m., five days per week for the duration of the project. Individuals would not be outdoors for the entire noise producing period. Under this condition, persons would not be exposed to long-term and regular noise above 85 dB. Therefore, nearby building occupants would not be expected to experience loss of hearing. .

The demolition contractor would be responsible for ensuring that noise levels do not exceed applicable standards. The demolition contractor would be expected to utilize modern, quieter demolition equipment with appropriate noise suppression design to reduce noise levels. A temporary noise barrier would be installed, as required, to protect Base personnel at the exterior of buildings. The demolition contractor would be responsible for determining if any hearing protection or other mitigation measures are required.

The number and type of aircraft operations would not change under the Proposed Action. Therefore, the primary source of noise at Fairchild AFB would continue to be from aircraft and the noise contours would not change from existing conditions. It should be noted that noise from flying activities would tend to mask the noise generated by construction projects for the same exposure area. The perception would be that demolition noise likely would not be discernible during periods of aircraft operations. However, there could be periods of time during which construction or demolition noise could be discerned and provide minor annoyance. This condition would occur when construction or demolition activity is underway and flying activity is low.

**Operational Noise.** There would be no operation noise associated with the Proposed Action because the central steam plant would be demolished and no replacement building would be constructed on the site.

#### **4.2.2 No Action Alternative**

The central steam plant and associated facilities would not be demolished as a result of the No Action Alternative. No demolition noise would result. The noise environment would be the same as baseline conditions.

#### **4.2.3 Cumulative Impacts**

Cumulative noise impacts could result in the event that proposed AT/FP construction at the Main Gate occurs at the same time as planned demolition of the central steam plant (Table 2-1). Impacts would not be considered significant because no residential units are located in the vicinity of the Main Gate or near the central steam plant. Cumulative impacts would not be expected as a result of demolition of the central steam plant because the distance between this facility and Base gates is great enough that there would be no combination of construction noise from the project sites.

#### **4.2.4 Mitigation**

Noise levels would be temporarily increased during the demolition activities associated with the Proposed Action. Noise from the Proposed Action would not be considered a significant impact. Mitigation measures would not be required for the Proposed Action.

## 4.3 AIR QUALITY

Impacts to air quality would be considered significant if a Federal action resulted in violation of a NAAQS, resulted in annual emissions of a pollutant greater than 250 tons per year (definition of a “major stationary source” in an attainment area as defined in 40 CFR 52.21(b)(1), or exceeded any significance criteria established by the Washington State Implementation Plan.

### 4.3.1 Proposed Action

Fugitive dust from ground disturbing activities and combustion emissions from demolition equipment would be generated as a result of the Proposed Action. Fugitive dust would be generated from activities associated with site demolition, clearing, grading, fill operations, and from vehicular traffic moving over the disturbed site. These emissions would be greatest during the initial demolition activities and would vary from day to day depending on the demolition phase, level of activity, and prevailing weather conditions.

The quantity of uncontrolled fugitive dust emissions from a demolition site is proportional to the area of land being worked and the level of demolition activity. The USEPA has estimated that uncontrolled fugitive dust emissions from ground-disturbing activities would be emitted at a rate of 80 lbs of TSP per acre per day of disturbance (USEPA 1995). In a USEPA study of air sampling data at a distance of 50 meters downwind from demolition activities, PM<sub>10</sub> emissions from various open dust sources were determined based on the ratio of PM<sub>10</sub> to TSP sampling data. The average PM<sub>10</sub> to TSP ratios for top soil removal, aggregate hauling, and cut and fill operations is reported as 0.27, 0.23, and 0.22, respectively (USEPA 1988). Using 0.24 as the average ratio for purposes of analysis, the emission factor for PM<sub>10</sub> dust emissions becomes 19.2 lbs per acre per day of disturbance. Fugitive dust emissions from demolition activities would be generated primarily from building dismemberment, debris loading, and debris hauling. The USEPA has established a recommended emission factor of 0.011 lbs of PM<sub>10</sub> per square foot of demolished floor area. This emission factor is based on air sampling data taken from the demolition of a mix of commercial brick, concrete, and steel buildings (USEPA 1988).

The USEPA also assumes that 230 working days are available per year for construction (accounting for weekends, weather, and holidays), and that only half of these working days would result in uncontrolled fugitive dust emissions at the emitted rate described above (USEPA 1995). The construction emissions presented in Table 4-2 include the estimated annual PM<sub>10</sub> emissions associated with the Proposed Action at Fairchild AFB. These emissions would produce slightly elevated short-term PM<sub>10</sub> ambient air concentrations. The USEPA estimates that the effects of fugitive dust from construction activities would be reduced significantly with an effective watering program. Watering the disturbed area of the construction site twice per day with approximately 3,500 gallons per acre per day would reduce TSP emissions as much as 50 percent (USEPA 1995). The lime pebbles would be containerized prior to removal from the building to minimize the potential for generation of lime dust during transportation for disposal.



**Table 4-2 Air Pollutant Emissions from the Proposed Action**

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	SO <sub>x</sub> (tpy)	NO <sub>x</sub> (tpy)	PM <sub>10</sub> (tpy)
AQCR CY99 Totals <sup>a</sup>	26,547	1,276	6,893	2,508	6,970
Proposed Action Annual Demolition Emissions (max. annual emissions during 1-yr demolition period)	0.10	0.44	0.12	1.11	4.68
Project Emissions as Percent of AQCR Emissions (1-year demolition period)	0.0004%	0.0343%	0.0444%	0.0017%	0.0671%

<sup>a</sup> AIRData 2003

tpy tons per year

Note: VOC is not a criteria air pollutant. However, VOC is reported because, as an ozone precursor, it is a controlled pollutant.

Specific information describing the types of demolition equipment required for a specific task, the hours the equipment is operated, and the operating conditions vary widely from project to project. For purposes of analysis, these parameters were estimated using established cost estimating methodologies for construction and experience with similar types of construction projects (Means 1996). Combustive emissions from construction equipment exhausts were estimated by using USEPA approved emissions factors for heavy-duty diesel-powered construction equipment (USEPA 1985). The construction emissions presented in Table 4-2 include the estimated annual emissions from construction equipment exhaust associated with the Proposed Action at Fairchild AFB. As with fugitive dust emissions, combustion emissions would produce slightly elevated air pollutant concentrations. However, the effects would be temporary, fall off rapidly with distance from the proposed demolition site, and would not result in any long-term impacts. Table 4-2 lists the annual emissions and the annual percent of change when compared to the baseline for the Proposed Action.

Table 4-2 shows estimated annual emissions from demolition equipment exhaust associated with the Proposed Action at Fairchild AFB. Values on Table 4-2 reflect the maximum annual estimated emissions during the proposed 1-year demolition period. As with fugitive dust emissions, combustion emissions would produce slightly elevated air pollutant concentrations. However, the effects would be temporary, fall off rapidly with distance from the proposed demolition site, and would not result in any long-term impacts. Table 4-2 also shows the annual percent of change when compared to the baseline for the Proposed Action.

Review of data in Table 4-2 indicates that the greatest increase in emissions from demolition and construction activities would be PM<sub>10</sub> (4.68 tons), which equates to 0.0671 percent of the PM<sub>10</sub> emissions within the AQCR. The emissions would be temporary and would be eliminated after completion of the activity. Emissions fall below the 10 percent level that would be considered regionally significant by the USEPA. Therefore, the air emission impacts from the demolition activities associated with the Proposed Action would not be considered significant.

1 Based on the requirements outlined in the USEPA general conformity rule published in  
2 58 Federal Register 63214 (November 30, 1993) and codified at 40 CFR Part 93, Subpart B  
3 (for federal agencies), a conformity analysis is required to analyze whether the applicable  
4 criteria air pollutant emissions associated with the project equal or exceed the threshold  
5 emission limits that trigger the need to conduct a formal conformity determination. The intent  
6 of the conformity rule is to encourage long range planning by evaluating air quality impacts  
7 from federal actions before the projects are undertaken. This rule establishes an elaborate  
8 process for analyzing and determining whether a proposed project in a nonattainment area  
9 conforms to the SIP and federal standards. Fairchild AFB is located in an attainment area,  
10 with the exception of PM<sub>10</sub>. As shown on Table 4-2, PM<sub>10</sub> emissions from the Proposed  
11 Action would fall below the 10 percent level that would be considered regionally significant  
12 by the USEPA. For this reason, and a formal conformity determination is not required.

13 A new 8-hour standard for ozone has also been proposed. However, a federal court  
14 blocked the implementation of the standard. Therefore, ozone is not analyzed.

#### 15 **4.3.2 No Action Alternative**

16 Emissions would continue to be generated by Base activities such as aircraft operations  
17 and other aircraft maintenance activities, as well as vehicle, boiler, generator, and fueling  
18 operations, and industrial processes. It is anticipated the emissions from these activities  
19 would continue at the levels generated under the baseline condition.

#### 20 **4.3.3 Cumulative Impacts**

21 The Air Force proposes to conduct only one other construction project during the time  
22 when the proposed construction associated with the demolition of the central steam plant on  
23 Fairchild AFB would occur. This other project would be the anti-terrorism/force protection  
24 gate improvements (with all gates being constructed in the same year as a worst-case  
25 situation). For analysis purposes, the emissions from this project were combined with the  
26 Proposed Action maximum annual emissions to represent the most conservative condition that  
27 would occur in any one year for cumulative condition impacts. The methodology used to  
28 calculate the emissions for the Proposed Action was used for the cumulative conditions.  
29 Table 4-3 lists the annual emissions and the annual percent of change when compared to the  
30 baseline for the Proposed Action cumulative condition.

**Table 4-3 Air Pollutant Emissions for Cumulative Condition**

Criteria Air Pollutant	CO (tpy)	VOC (tpy)	SO <sub>x</sub> (tpy)	NO <sub>x</sub> (tpy)	PM <sub>10</sub> (tpy)
AQCR CY99 Totals <sup>a</sup>	26,547	1,276	6,893	2,508	6,970
Proposed Action	0.10	0.44	0.12	1.11	4.68
Other Actions	2.17	0.32	0.12	1.08	11.10
Total Annual Emissions <sup>b</sup>	2.27	0.75	0.24	2.19	15.77
Cumulative Emissions at Fairchild AFB as Percent of AQCR Emissions	0.0086%	0.0590%	0.0035%	0.0874%	0.2263%

<sup>a</sup> AIRData, 2003

<sup>b</sup> Estimated emissions from Proposed Action (maximum one year emissions) and other action activities during the same year.

tpy tons per year

Note: VOC is not a criteria air pollutant. However, VOC is reported because, as an ozone precursor, it is a controlled pollutant.

Review of the data in Table 4-3 indicates that the greatest increase in emissions from demolition and construction activities for either cumulative condition would be PM<sub>10</sub> (15.77 tons) under the Proposed or Alternative Action cumulative condition. The PM<sub>10</sub> emissions equate to 0.2263 percent of the PM<sub>10</sub> emissions within the AQCR. The emissions for cumulative conditions would be temporary and would cease after completion of the activity. Emissions for the cumulative condition fall below the 10 percent level that would be considered regionally significant by the USEPA. Therefore, the air emissions from the demolition activities associated with the Proposed Action when combined with other projects would not be considered significant.

#### 4.3.4 Mitigation

Potential criteria pollutant emissions associated with the Proposed Action do not exceed significance criteria requirements. Therefore, no mitigative actions for improving the ambient air quality would be required. Although no mitigation measures are required, the Air Force would ensure that the best management practice of site watering for dust control is accomplished for demolition activities, as needed.

## 4.4 HAZARDOUS WASTES AND HAZARDOUS MATERIALS

### 4.4.1 Proposed Action

Hazardous wastes would be generated during demolition of the central steam plant and associated facilities. It is anticipated that the quantity of hazardous wastes generated during the demolition period would be negligible. The demolition contractor would maintain all records of all waste determinations, including appropriate results of analysis performed, substances and sample locations, date and time of collection, and other pertinent data as required by 40 CFR Parts 280, Section 74 and 40 CFR, Parts 262, Subpart D.

Before demolition of the central steam plant and associated facilities can begin, the contractor would be required to prepare a work plan and health and safety plan in the event

that contamination is encountered during excavation activities. The work plan and health and safety plan would address measures for using field instruments capable of detecting contaminants at harmful levels. In the event any contaminated soil is encountered, the demolition contractor will be required to excavate, properly dispose any contaminated soil and replace excavated soil with clean soil.

In the event of a spill of any amount or type of hazardous material or waste (including petroleum products that may be used during demolition), the contractor would take immediate action to contain and clean up the spill. Contractor spill clean up personnel would be trained and certified to perform spill clean up. The contractor would be responsible for proper characterization and disposal of any waste and clean up materials generated. All waste and associated clean up material would be removed from the project site and transported and/or stored in accordance with regulations until final disposal. All details concerning the spill would be provided to the government. The contractor is responsible for restoring a spill site to the condition prior to the spill or to an improved condition. With implementation of these best management practices, impacts to hazardous wastes would not be expected.

The 112 tons of pebble lime currently stored at the central steam plant would be removed from the site and reused (i.e., recycled). The removal of pebble lime would be conducted in accordance with applicable procedures for management of hazardous materials.

#### **4.4.2 No Action Alternative**

Demolition of the central steam plant and associated facilities would not be accomplished at Fairchild AFB as a result of the No Action Alternative. As a result, the 112 tons of pebble lime would continue to be stored at the central steam plant.

#### **4.4.3 Cumulative Impacts**

Hazardous wastes for other planned construction projects on Fairchild AFB would continue to be managed under existing regulations and Base management plans. Thus, when combining the other actions with the Proposed Action, no cumulative adverse impacts to hazardous waste management would be anticipated for the cumulative condition.

#### **4.4.4 Mitigation**

No significant impacts to hazardous wastes have been identified. Therefore, no mitigation measures would be required.

### **4.5 CULTURAL RESOURCES**

An undertaking is considered to have an effect on a historic property when the undertaking may alter characteristics of the property that may qualify the property for inclusion in the NHRP. An effect is considered adverse when it diminishes the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties would include, but would not be limited to:

- physical destruction, damage, or alteration of all or part of the property;
- isolation of the property from or alteration of the character of the property's setting when that character contributes to the property's qualification for the National Register;
- introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting;
- neglect of a property resulting in its deterioration or destruction; and
- transfer, lease, or sale of the property (36 CFR 800.9[b]).

Any ground-disturbing action in the area of an NRHP-eligible or potentially eligible archaeological site, or modification to such a site, can affect the integrity of that cultural resource, resulting in alteration or destruction of those characteristics or qualities which make it significant and potentially eligible for inclusion in the NRHP. While archaeological sites or historic buildings or structures can be destroyed during a single event, more often it is the cumulative effect of recurrent disturbing actions that diminish the integrity of the cultural resource and its significant characteristics.

#### 4.5.1 Proposed Action

**Archaeological Resources.** No NRHP-eligible archaeological resources are located within or adjacent to the ROI for Fairchild AFB. The probability is low that undisturbed, significant archaeological resources, including human graves, will be discovered on Fairchild AFB during future construction (USAF 2001a). The Proposed Action would not be expected to result in any effects to archaeological resources on Fairchild AFB.

The Fairchild AFB ICRMP sets forth standard procedures that must be followed in the event any type of archaeological site is discovered during the course of any earth-disturbing activity of the Base. In the event previously undetected archaeological resources or human remains are discovered during project activities, the demolition contractor or responsible individual would be required to stop demolition activities in the affected area (and a reasonable buffer exclusionary area) and contact the Security Forces Commander, and the 92 CES/CEV Cultural/Natural Resources Manager, who will take steps to minimize impacts to the resource. Procedures to follow must be in accordance with Section 6.8.2 (*Procedures to be Followed if Any Type of Archaeological Site is Discovered*) of the ICRMP for Fairchild AFB. Any unknown site or other cultural remains inadvertently discovered must be assumed to be potentially eligible for NRHP listing.

**Historical Resources.** The central steam plant (Bldg 2175) is not eligible for inclusion on the NRHP. The Proposed Action would not result in demolition or modifications to any historic properties or structures. The Proposed Action would not result in impacts to historical resources.

**Native American Concerns.** No Native American concerns have been identified for Fairchild AFB. The Proposed Action would be implemented in accordance with the Fairchild AFB ICRMP, which specifies notification procedures applicable to Native American groups.

With compliance to the ICRMP, the Proposed Action would not result in impacts to Native American concerns.

#### **4.5.2 No Action Alternative**

Demolition of the central steam plant would not be accomplished at Fairchild AFB as a result of the No Action Alternative. However, facilities construction typical of that in previous years likely would occur as part of the Base's overall facilities modernization plan. Cultural resources would continue to be managed under existing regulations and the Base's ICRMP. The No Action Alternative would not result in impacts to cultural resources

#### **4.5.3 Cumulative Impacts**

As with the Proposed Action, no NRHP-eligible archaeological or historical resources are found within the ROI for the other actions. Cultural resources would continue to be managed under existing regulations and the Fairchild AFB ICRMP. Thus, when combining the other actions with the Proposed Action, no cumulative adverse cultural resources effects, including visual, would be anticipated under the cumulative condition.

#### **4.5.4 Mitigation**

No significant archaeological and historical resources effects have been identified. Therefore, no mitigation measures would be required.

### **4.6 SOLID WASTE MANAGEMENT**

Impacts to the solid waste management would be considered significant if the federal action substantially increased the demands on systems, resulting in the need for additional capacity or new facilities.

#### **4.6.1 Proposed Action**

In considering the basis for evaluating the significance of impacts on solid waste, several items were considered. These items include evaluating the degree to which the Proposed Action waste generation could affect the existing solid waste management program and the capacity of the area landfill. Analysis of the impacts associated with the proposed demolition of the central steam plant and associated facilities is based on the following assumptions:

- The weight of concrete debris is 150 lb/ft<sup>3</sup> (Merritt 1976);
- The weight of asphaltic concrete roadways is 130 lb/ft<sup>3</sup> (AI 1983);
- Approximately 4 pounds of demolition debris is generated for each square foot of floor area for new structures (Davis 1995);
- Approximately 92 pounds of demolition debris is generated for each square foot of floor area of demolished structures (USACE 1976);

- Approximately 96 pounds of demolition and construction debris are generated for each square foot of floor area of renovated structures;
- Approximately 1 pound of construction debris is generated for each square foot of new asphaltic concrete pavement;

Under the Proposed Action, there would be no change in the number of personnel residing or working on Base. Thus, there would be no change in solid waste generated by Air Force active duty, reserve, and civilian personnel. The volume of municipal waste transported to the waste-to-energy plant would continue at the same rate as the baseline condition.

Type IV solid waste would be generated from implementation of the Proposed Action. These wastes would consist of building debris and demolition materials such as concrete, metals (i.e., roofing, reinforcement bars, conduit, and piping), fiberglass (i.e., roofing materials and insulation), cardboard, plastics (PVC piping, packaging material, and shrink wrap), and lumber. These materials would either be recycled or be placed in the appropriate construction materials landfill. These wastes would be in excess of the solid municipal wastes generated by Base personnel.

With implementation of the Proposed Action, approximately 49,488 square feet of buildings and structures would be demolished. Approximately 2,276 tons of solid waste would be generated by demolition of the central steam plant and associated facilities. The exact amount of debris that would be disposed of in a landfill is unknown because the contractor will recycle material to the maximum extent. Demolition and inert wastes generated by the Proposed Action would be transported to an off-Base landfill that is permitted to accommodate planned waste disposal. Refuse would continue to be sent to a waste-to-energy plant. In addition to the 2,276 tons of solid waste, 112 tons of pebble lime would be recycled or reused. Impacts to solid waste management would not be expected.

#### **4.6.2 No Action Alternative**

Demolition of the central steam plant and associated facilities at Fairchild AFB would not be accomplished as a result of the No Action Alternative. Solid waste generation would continue at the levels experienced under the current conditions.

#### **4.6.3 Cumulative Impacts**

It is estimated that 2,394 tons of debris would be generated by other actions at Fairchild AFB that could occur at the same time as the Proposed Action. When combined with solid waste from the Proposed Action, the total amount of solid waste would be approximately 4,670 tons during the year when demolition of the central steam plant would occur. Disposal of demolition and construction debris from the Proposed Action and other actions would increase the disposal rate at the off-Base landfill over a one-year period. The contractor for demolition of the central steam plant would recycle materials to the maximum extent possible, thereby reducing the amount of construction and demolition debris disposed in the landfill. Demolition debris from the Proposed Action, when combined with construction debris from

other actions, would continue to be disposed at a permitted landfill. Disposal of this solid waste would not significantly reduce the life expectancy of the landfill.

#### **4.6.4 Mitigation**

No significant impacts to solid waste management would be anticipated. Therefore, no mitigation would be required.

### **4.7 ENVIRONMENTAL MANAGEMENT**

#### **4.7.1 Proposed Action**

##### ***Pollution Prevention***

The demolition of the central steam plant and associated facilities at Fairchild AFB would be accomplished in accordance with existing Air Force and Base directives, as well as innovative pollution prevention technologies, to achieve the P2 goals of minimizing or eliminating the use of hazardous materials, reducing the volume of hazardous wastes and release of pollution into the environment, and conserving energy. The Proposed Action would result in recycling and reuse of materials in order to reduce the amount of debris that would enter landfills. The Proposed Action would not be expected to result in the inability of the Base to achieve its P2 goals.

##### ***Asbestos***

The contractor would be responsible for an asbestos survey prior to demolition activities. It is possible that asbestos could be encountered in older buildings that would be demolished. The demolition contractor would be responsible for all ACM removal. Friable and nonfriable ACM would be removed prior to demolition by a licensed asbestos abatement contractor using appropriate techniques prior to actual demolition of the building. All ACM activities would be conducted in accordance with Base ACM management procedures.

##### ***Lead-Based Paint***

The contractor would be responsible for a LBP survey of the facilities prior to demolition activities. It is possible that LBP could be encountered in older buildings that would be demolished. The demolition contractor would be responsible for all LBP removal. Removal of LBP would comply with requirements identified in 29 CFR 1910 and ACM management procedures established by Fairchild AFB.

##### ***Environmental Restoration Program***

Impacts to the environmental restoration program would be considered significant if the federal action disturbed (or created) contaminated sites resulting in adverse effects to human health or the environment. An impact would be considered significant if it were to result in: exposure of people or structures to major chemical hazards; impede the progress of ongoing



or planned investigations or remedial actions; or, result in uncontrolled release of chemicals/fuels into the environment.

Fairchild AFB has two basewide IRP sites and four IRP sites located near the central steam plant, as described in Subchapter 3.7.2. Facility demolition activities would be coordinated with the Base Environmental Flight and Bioenvironmental Engineering to ensure that demolition would avoid interference with any ongoing IRP investigation and remediation work and would not worsen the condition of any site. With implementation of these best management practices, impacts to IRP sites would be avoided.

#### **4.7.2 No Action Alternative**

No demolition of the central steam plant or associated facilities would be accomplished at Fairchild AFB as a result of the No Action Alternative. No impacts to pollution prevention would result from the No Action Alternative. Any asbestos or lead-based paint that may be present at the central steam plant or associated facilities would continue to remain in place. Impacts to ERP sites would not be anticipated. However, facilities construction typical of that in previous years likely would occur as part of the overall facilities modernization plan for Fairchild AFB. Management of ERP site work would continue in accordance with applicable environmental plans and policies for Fairchild AFB. The No Action Alternative would not result in impacts to environmental management at Fairchild AFB.

#### **4.7.3 Cumulative Impacts**

Other planned projects on Fairchild AFB are located where no ERP sites have been identified. Other planned projects would be required to comply with regulatory requirements for pollution prevention, ACM, LBP and ERP site avoidance as described for the Proposed Action. This would minimize the potential for cumulative impacts. When completed, activities at the other facilities would be managed in accordance with applicable environmental plans and policies. No cumulative impacts to environmental management on Fairchild AFB would be anticipated.

#### **4.7.4 Mitigation**

No significant impacts to environmental management would be anticipated. Therefore, no mitigation would be required.

### **4.8 UNAVOIDABLE ADVERSE IMPACTS**

Unavoidable adverse impacts would result from implementation of the Proposed Action.

#### **4.8.1 Air Quality**

The emission of air pollutants associated with demolition of the central steam plant and associated facilities is an unavoidable condition, but is not considered significant.

#### 4.8.2 Noise

Noise resulting from temporary demolition activities at the central steam plant site is an unavoidable condition. Short-term annoyance and speech interference may occur during the period of time when demolition equipment is in use for the Proposed Action. Sleep disturbance and hearing impairment would not be expected. Noise would not be considered a significant impact.

#### 4.8.3 Safety

The demolition contractor would follow applicable safety regulations and guidance, thereby minimizing the potential for exposure to harmful substances in the event of a mishap at the central steam plant during demolition.

#### 4.8.4 Energy

The use of nonrenewable resources is an unavoidable occurrence, although not considered significant. Demolition associated with the Proposed Action would require use of fossil fuels, a nonrenewable natural resource. Energy supplies, although relatively small, would be committed to the Proposed Action.

### 4.9 RELATIONSHIP BETWEEN SHORT-TERM USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The Proposed Action would not result in intensification of land use at the site or in the area surrounding the Base. Implementation of the Proposed Action would not result in loss of open space. The site of the central steam plant is designated for development, and was not planned for use as open space. Therefore, it is not anticipated that the Proposed Action or No Action Alternative would result in any cumulative land use or aesthetic impacts. Long-term productivity of the site would be increased by implementation of the Proposed Action, which would enable improvement to land use on the site.

### 4.10 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The irreversible environmental changes that would result from implementation of the Proposed Action involve consumption of energy resources and human resources. The use of these resources is considered to be permanent.

#### 4.10.1 Energy Resources

Energy resources such as petroleum-based products (i.e., gasoline and diesel), natural gas, and electricity would be used for the Proposed Action and would be irretrievably lost. Gasoline and diesel would be used for operation of demolition vehicles and equipment. Gasoline would be used for vehicle operation. Consumption of these energy resources would not place a significant demand on their supply systems or within the region.

#### **4.10.2 Human Resources**

The use of human resources for demolition is considered an irretrievable loss only in that it would preclude the affected personnel from engaging in other work activities. However, the use of human resources for the Proposed Action represents employment opportunities, and is considered beneficial.

## CHAPTER 5 LIST OF PREPARERS

Name	Degree	Resource	Years of Experience
Crisologo, Rosemarie	B.S., Biological Sciences M.S., Environmental Engineering	Environmental Science	21
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Wooten, R.C., Ph.D.	Ph.D., Ecology and Biology	Technical Manager	34

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## CHAPTER 6 PERSONS AND AGENCIES CONSULTED

The following persons and agencies consulted during preparation of this EA.

***Brooks Air Force Base, Texas, Headquarters Air Force Center for Environmental Excellence***

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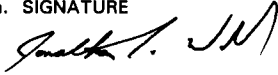

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**APPENDIX A**  
**AIR FORCE FORM 813**

<b>REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS</b>			Report Control Symbol RCS:	
INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).				
<b>SECTION I - PROPONENT INFORMATION</b>				
1. TO (Environmental Planning Function) 92 CES/CEV	2. FROM (Proponent organization and functional address symbol)	2a. TELEPHONE NO.		
3. TITLE OF PROPOSED ACTION Demolition of Central Steam Plant at Fairchild AFB, Washington				
4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date) Building 2175, Central Steam Plant, is no longer in operation. All associated facilities need to be demolished and disposed of.				
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.) Demolish coal-burning and ash-handling equipment within the Steam Plant, building 2175, and adjacent spray Dryer Absorber (SDA) and Baghouse structures.				
6. PROPONENT APPROVAL (Name and Grade) Jonathan Wald, GS-11	6a. SIGNATURE 	6b. DATE 5-Nov-03		
<b>SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY.</b> (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown effect)				
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)	<input checked="" type="checkbox"/> +	<input type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
9. WATER RESOURCES (Quality, quantity, source, etc.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)	<input checked="" type="checkbox"/> +	<input type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)	<input checked="" type="checkbox"/> +	<input type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
16. OTHER (Potential impacts not addressed above.)	<input type="checkbox"/> +	<input checked="" type="checkbox"/> 0	<input type="checkbox"/> -	<input type="checkbox"/> U
<b>SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION</b>				
17.	<input type="checkbox"/>	PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # _____ ; OR		
	<input checked="" type="checkbox"/>	PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.		
18. REMARKS 17. An environmental assessment (EA) is being prepared to evaluate the impacts of this action on Fairchild AFB.  No direct, indirect, or cumulative environmental impacts are anticipated with this action. The proposed action occurs in an area designated as in attainment for all air quality standards. The proposed action is considered to be de minimus, therefore a conformity determination is no required.				
19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) Ronald R. Daniels, EPC Exec. Sec.	19a. SIGNATURE 	19b. DATE 6 Nov 03		

**4. PURPOSE AND NEED**

The purpose of the action is to eliminate the defunct Central Steam Plant, Bldg. 2175, because it is no longer in use and to increase the potential land use of the area now covered by the facilities. The action is needed to:

- increase safety and occupational health by eliminating unoccupied building and removing hazardous material;
- reduce the amount of waste, in the long-term, on Fairchild AFB by demolishing buildings and removing debris;
- improve overall base appearance and increase potential land use.

**5. DESCRIPTION OF THE PROPOSED ACTION**

Proposed Action: Demolish Central Steam Plant and Associated Facilities as Follows:

- Demolish coal-burning and ash-handling equipment within the Central Steam Plant including but not limited to coal pulverizers, weigh belt feeders, coal crusher with conveyor and dust collector, ash handling system, and steam-driven vacuum at the top of the Steam Plant.
- Demolish the SDA/Baghouse steel structures, the concrete exhaust stack, the connecting piping between the Steam Plant and SDA/Baghouse, and all ash-handling equipment, ash slurry system equipment, and all ancillary equipment within the facility.
- Remove 112 tons of pebble lime.